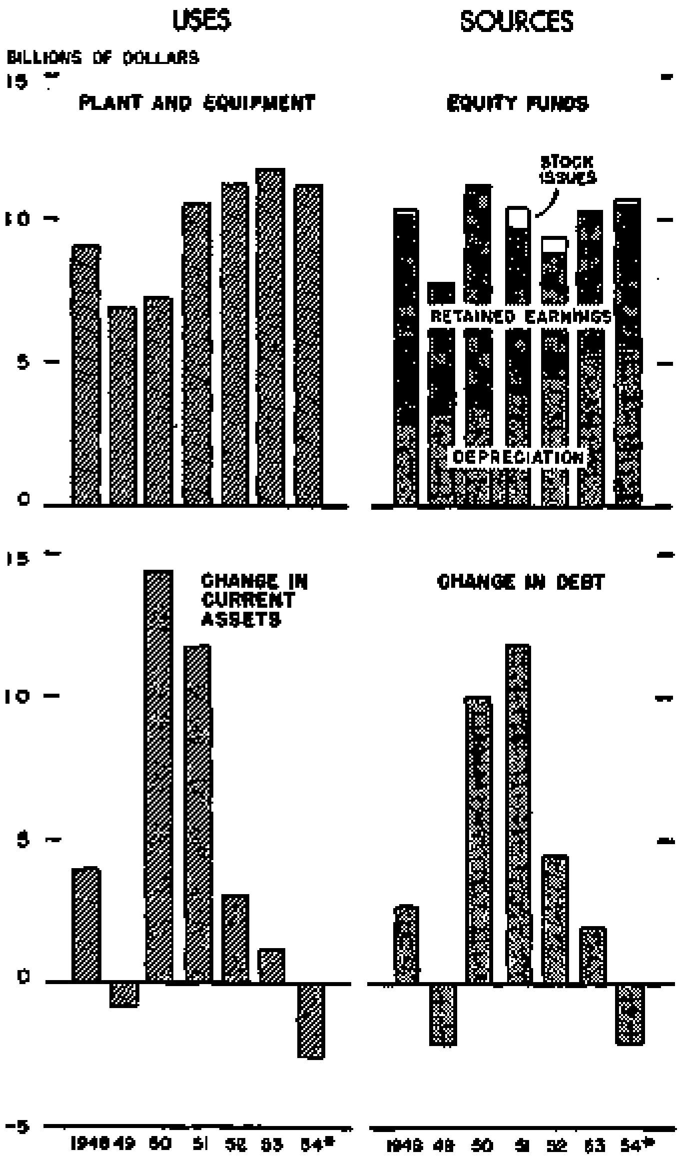
by Loughlin F. McHugh ☆

Financial Experience of Manufacturing Corporations

THE readjustment in economic activity during the 1953–54 period centered in manufacturing, which experienced a reduction in orders for durable goods for final use and likewise was the segment in which production and income were most affected by the reduction in business inventories. From early 1953 to mid-1954, manufacturers' production and sales were reduced about one-tenth and before-tax profits about one-fifth. After-tax profits were sustained by the Federal tax reductions effective in 1954.

Manufacturing Corporations

Uses and Sources of Funds



* First half, seasonally adjusted, at annual rates.

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It is timely to review the recent financial experience of manufacturing concerns against the background of the postwar period as a whole. Table 1 presents annual estimates of uses and sources of capital funds for manufacturing corporations from 1946 through 1953, and first half-year data for 1953 and 1954. The estimates for periods subsequent to 1951 are based on less complete data than for earlier years, but for the period as a whole, table 1 presents an adequate and fairly clear picture of overall trends.

Manufacturers have been in the forefront of the extensive capital expansion programs of business firms in the postwar period. In the 8½ years from the end of 1945 through mid-1954, manufacturing corporations used $115 billion of capital funds in expanding, modernizing, and replacing production facilities, and in adding to their inventories and other working capital to meet the needs of growing markets for products and for competitive efficiency. This expenditure, far in excess of any previous experience, comprised roughly half of the uses of new capital funds by all nonfinancial corporations.

Two-thirds of the manufacturing total was spent for plant and equipment. Nearly one-fourth represented new inventory requirements, while extension of customer credit lines accounted for one-tenth of the total.

The change in net cash position was relatively modest in the postwar period, amounting to an increase of $2 billion or less than 2 percent of the total postwar disposition of funds. This relatively small increase in "cash" assets (cash on hand, bank deposits and U. S. Government securities) was in the main a reflection of the unusually liquid status of manufacturers attained during the war period.

In meeting this postwar demand for capital, manufacturers relied principally on internally generated funds—retained earnings and depreciation allowances. As may be seen from the first chart, these sources alone were equivalent to total plant and equipment outlays of these companies. Of the $78 billion of internal funds raised, profits retained in business accounted for the major share, approximately $48 billion. Depreciation charges were likewise a large source and have increased steadily over the years.

Manufacturers traditionally have not been heavy users of long-term debt. Such indebtedness was increased by about $15 billion, or one-eighth of total requirements for funds, in the 8½-year period. While this postwar debt increase was somewhat more rapid than in former periods of expansion, the relative share of long-term debt in the over-all capital structure of manufacturing corporations is not high at the present time, while interest charges currently are a much smaller relative share of funds available for servicing the debt than in the prewar period.

Only a minor portion of postwar capital requirements was covered by sale of new stock. Less than $4 billion, or about

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5 percent of total funds utilized by manufacturing corporations came from stock issues.

Short-term financing through increases in current liabilities accounted for the remaining $16 billion of capital needs in the postwar period. Of this total, about $5 billion took the form of bank loans, while borrowing from suppliers accounted for most of the remainder.

Table 1.—Sources and Uses of Funds of Manufacturing Corporations, 1946–54

[Billions of dollars]

	1946	1947	1948	1949	1950	1951	1952 [1]	1953 [1]	First half 1953 [4]	First half 1954 [1]
Total uses	9.1	14.4	13.4	6.3	21.6	22.2	14.5	14.0	7.0	0.0
Plant and equipment	7.0	8.6	9.0	6.0	7.2	10.5	11.5	12.0	5.5	4.0
Increase in other assets—total	2.1	7.4	9.9	−.8	14.4	11.7	3.0	2.0	1.5	−5.0
Inventories	0.2	4.3	2.7	−2.5	6.2	7.8	1.5	2.0	1.5	−2.0
Receivables [2]	.1	2.5	1.0	−1.0	5.4	2.2	2.0	−1.0	1.0	.5
Cash, deposits, and U. S. Government securities [1]	−4.2	.6	.3	2.8	3.0	1.7	−.5	1.0	−1.0	−3.5
Total sources	8.8	13.7	13.1	5.7	21.2	22.2	14.0	13.0	6.3	.0
Retained profits [3]	3.8	6.7	7.2	4.5	7.6	5.7	4.0	5.0	9.0	5.5
Depreciation	2.0	2.4	2.8	3.2	3.5	4.0	4.6	5.5		
Stock issues	1.0	.6	.3	.1	.1	.7	.5	(4)	(4)	(4)
Increase in long-term debt [5]	1.5	1.9	1.8	.4	(4)	3.2	3.5	2.0	1.5	.5
Increase in short-term debt [6]	.6	3.0	.9	−2.5	10.0	8.6	1.0	.5	−1.0	−4.0
Discrepancy	.3	.3	−.2	.4	.4	(4)	.5	.5	.6	.9

1. Preliminary and rounded to nearest $0.5 billion.
2. Includes small amount of miscellaneous current assets.
3. Including depletion.
4. Less than $50 million, or in the case of 1952–54 data, less than $250 million.
5. Includes bonded debt, long-term bank loans, mortgages and other long-term debt.
6. Includes bank loans, trade payables, Federal tax liabilities and miscellaneous current liabilities.

Source: U. S. Department of Commerce, Office of Business Economics, based upon Internal Revenue Service, Securities and Exchange Commission, Federal Trade Commission, and other financial data.

Table 2 gives rough perspective to various aspects of the postwar expansion programs of manufacturing corporations. The first column presents book values of selected balance sheet items as of the end of 1945. The second column presents the proportions that these book values were of the comparable values for all nonfinancial corporations. Thus, gross fixed assets of manufacturing corporations at the end of 1945 amounted to $53 billion, or just under two-fifths of the book value of gross fixed assets of all nonfinancial corporations. As may be seen, the majority of the items range around the 50 percent ratio, the major exceptions being in the case of inventories, where manufacturers accounted for two-thirds of the total, and at the other extreme, long-term debt which was one-sixth of the total.

The relatively high inventory proportion for manufacturing corporations reflects in part the low volume of inventories normally held in important nonmanufacturing industries such as railroads and public utilities, and in part the fact that in distributive channels, where inventories are important, a relatively large share of holdings are in noncorporate concerns.

The third and fourth columns of the table present the cumulative amounts of manufacturers' postwar uses and sources of funds through 1953 and the proportions that these are of total uses and sources for all nonfinancial corporations. Some rough notion of the relative expansion areas may be gained from a comparison of columns 1 and 3. Thus, manufacturers spent on plant and equipment roughly 1½ times the amount shown for the book value of gross fixed assets at the start of the period. The rise in the value of inventories was likewise quite striking in the perspective of 1945 book values. At the other extreme was the relatively small need to add to cash items, which, as indicated earlier, were exceptionally high at the end of the war.

The rise in long-term debt of manufacturers is apparent from columns 2 and 4, where it is indicated that manufacturers accounted for roughly one-third of the postwar increase while starting the period with one-sixth of such debt then outstanding.

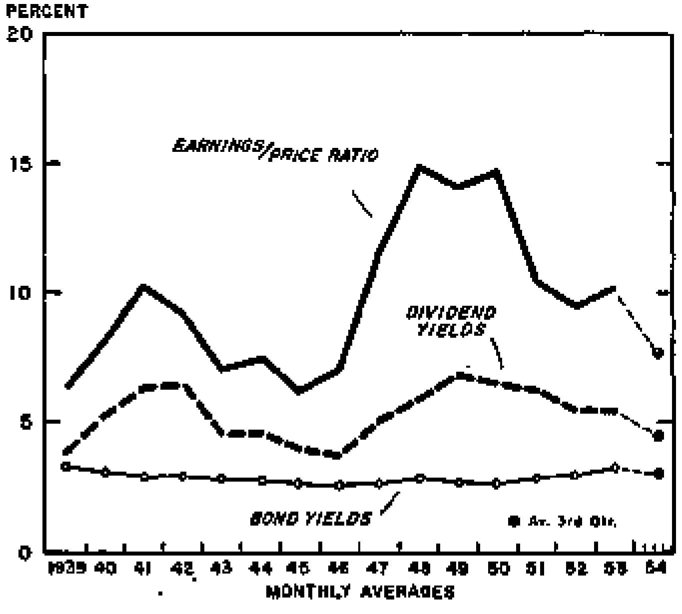
Sensitivity of manufacturing

Generally speaking, manufacturing is more sensitive than other business to changes in overall demand. This was typically true in prewar cyclical developments, and with modifications, the tendency reappeared in the later postwar years. This reflects two primary factors. Manufacturing has an important fraction of its total capacity engaged in the turning out of capital equipment, the demand for which is sensitive to changes in general business activity. Changes in inventory demand have also been especially significant in the moderate cycles in manufacturing activity which occurred in the postwar period, namely those of 1948–50 and 1952–54.

The cyclical variability of demand for capital funds in manufacturing is clearly outlined in the annual data of sources and uses shown in table 1 and the chart on page 13. Plant and equipment expenditures rose steadily during the 1946–48 period, but in the downturn of 1949 manufacturers reduced their fixed capital outlays from the 1948 volume. Nonmanufacturers' fixed investment rates were little changed in 1949. The 1949 reduction in manufacturers' current assets was sharper, with the shift in inventory trends particularly striking. Manufacturers had added steadily to the value of their stocks through 1948, though the rate of increase moderated over the period. In 1949, the book

Industrials

Common Stock and Bond Yields



BASIC DATA: MOODY'S INVESTORS SERVICE

U. S. DEPARTMENT OF COMMERCE, OFFICE OF BUSINESS ECONOMICS 54-45-6 value of inventories was reduced to the extent of $2¼ billion, roughly equivalent to the increase which had occurred the preceding year.

As is clear from the chart, the reduced financing resulting from these 1949 developments was associated with a reduction of retained earnings and a liquidation of short-term indebtedness in that period.

With the outbreak of Korean hostilities, demand for capital funds quickly expanded, primarily due to a rapid increase in inventories and customer receivables. Combined, these rose by $11 billion in 1950, and the expansion was almost matched in 1951. The military programs required substantial plant and equipment investment, and the general rise in business activity was accompanied by widespread capacity expansion. By 1951 manufacturing plant and equipment outlays had risen to $10¾ billion, almost 50 percent higher than the low reached in 1949.

These new and enlarged demands for funds were filled in part from higher retained earnings, but in even greater degree from expanded short-term indebtedness.

It was in this 1951–52 period that manufacturers made their most extensive use of external sources of long-term financing (table 1). Such financing in this 2-year period of rapid capital expansion involved the raising of $8 billion, or almost one-half of the total amount in the whole postwar period. Additions to long-term debt totaled $7 billion in this period.

It is of interest to note that manufacturers' recourse to external long-term markets for funds has tended to fall off sharply once capital expansion programs were fairly well under way. For example, the early postwar peak was reached in 1947 when $2.7 billion was raised, but by 1950, the manufacturing group as a whole issued a negligible volume of debt and equity securities. The same tendency is being repeated in the current period in somewhat modified degree.

Recent trends

Fixed capital programs of manufacturers stabilized in 1953, with a minor peak in expenditures reached in the first quarter of the year. A slight downward drift then set in and this has been extended through the current period. Thus, the 1953–54 downturn in general business activity was accompanied by only a moderate reduction in manufacturers' outlays on plant and equipment.

As indicated in a review of overall plant and equipment trends presented earlier in this issue, manufacturers estimate their fixed outlays in the current quarter at a seasonally adjusted rate of about $11 billion, 10 percent below the high reached last year. In the 1948–49 period, these expenditures dropped from an early 1948 high of $9¾ billion to a low of $6½ billion reached in the first quarter of 1950.

The major change in capital demand by manufacturers in the most recent period involved a reversal of inventory trends. The Korean-period buildup of inventories tapered sharply after 1951, and in the following 2 years, net annual expansions were in the $1 to $2 billion range. Liquidation of manufacturers' inventories began in late 1953 and continued through the first three quarters of this year. For the first 10 months of 1954, the reduction in inventories held by manufacturing corporations amounted to $3 billion on a seasonally adjusted basis.

Other current assets of manufacturers were also greatly reduced from 1953 to 1954. This was mainly a reflection of the rather sharp reduction in cash resources which occurred in early 1954. In good part this decline in liquid assets in the first half of 1954 was related to the combination of a drop in corporate profits before taxes and the heavy seasonal impact of Federal tax payments.

In the first half of 1953 profits were still rising, and with tax rates relatively unchanged, the excess of tax payments over accruals amounted to $1.3 billion, a sum not particularly large when related to the legal requirement that corporations move towards a pay-as-you-earn tax schedule.

Table 2.—Corporate Manufacturing Investment and Its Financing

	Book value outstanding (end of 1945)		Uses and sources of funds, 1946–53	
	Billions of dollars	Percent of total for all corporations	Billions of dollars[1]	Percent of total for all corporations[1]
ASSETS				
Gross fixed assets[2]	53	38	72	48
Selected current assets	54	57	43	47
Inventories	17	65	27	63
Receivables	14	54	12	28
Liquid assets[3]	23	53	5	56
LIABILITIES				
Long-term liabilities and capital	100	42	91	49
Capital stock and capital reserves	65	40	49	60
Depreciation reserves	29	53	28	45
Long-term debt	7	17	14	33
Selected short-term liabilities[4]	17	40	19	43

1. Excluding banks and insurance companies.
2. Exclusive of land and before depreciation.
3. Cash, deposits, and U. S. Government securities.
4. Trade payables, bank loans, and Federal tax liabilities.

Source: U. S. Department of Commerce, Office of Business Economics, and Securities and Exchange Commission.

In the comparable period in 1954, taxable earnings were lower, tax rates had been reduced by elimination of the excess profits tax, and a further acceleration of tax payments was required by law. The simultaneous impact of these forces resulted in a large excess—$4½ billion for manufacturing corporations—of Federal tax payments over accruals. This excess, although in considerable degree already taken into account in corporation fiscal planning, nevertheless resulted in a substantial drain on cash resources. It is expected that in the latter part of the year, corporations will again add to their liquid assets. It appears, however, that the improvement in liquidity in 1954 will not parallel that of 1949, when the decreased capital demands were accompanied by a marked improvement in overall liquidity.

Current financial condition

It may be noted that the total volume of long-term capital funds available to manufacturing corporations in the first half of 1954 was larger by about one billion dollars than expenditures on fixed capital. The availability of these funds, supplemented the reduction of current assets to make possible a liquidation of $6 billion of short-term debt, principally Federal tax liabilities and bank loans. Thus as in all earlier postwar years, the net working capital position of manufacturers was further improved in 1954, and the excess of current assets over liabilities at mid-1954 was at the highest point for the postwar period.

Other indexes of liquidity and of general financial condition, while not so high as in some earlier postwar years, also point up the relatively favorable financial condition of manufacturing corporations.

Despite the tax drain on liquid resources in early 1954, the ratio of cash and U. S. Government securities to total current liabilities was slightly higher at mid-1954 than a year earlier, and about equal to the ratio in mid-1952.

Table 3 presents several other indexes of financial condition of manufacturing corporations over an extended time period. The first column, which relates liquid assets to sales, is commonly used as a measure of the adequacy of liquid resources in the light of the going volume of business. As may be seen, 1954 "cash" holdings are at a low point relative to sales for the postwar period. The volume of liquid resources currently held represents, however, a somewhat larger proportion of sales than in the late twenties.

Table 3.—Selected Financial Ratios for Manufacturing Corporations

[Percent]

Year	Proportion of sales represented by—			Profits after taxes to net worth	Long-term debt to invested capital [1]	Interest payments on debt to funds available for interest payments [2]
	Liquid assets	Profits before taxes	Profits after taxes			
1929	8.4	6.9	6.0	7.9	9.3	12.9
1940	10.6	8.4	5.7	8.5	11.2	6.1
1945	16.2	7.2	2.9	6.2	9.1	4.3
1948	9.0	9.2	5.6	13.0	12.6	3.1
1949	12.1	7.7	4.6	9.4	13.8	4.3
1951	11.0	9.8	4.1	9.7	13.1	3.1
1953	10.3	8.0	3.5	8.3	15.7	4.3
1954—2nd quarter	9.5	7.7	3.9	8.2	15.7	5.1

1. Long-term debt plus capital stock and capital reserves.
2. Profits before taxes plus interest paid.

Source: U. S. Department of Commerce, Office of Business Economics.

Profits rate off in 1954

In view of the relatively high dependence of manufacturers on internal financing, the trend of their profits is of special importance in analysis of capital financing. Profits before taxes were off from 1953 to 1954 both absolutely and relative to sales, with the decline in the dollar total approximating one-fifth and the ratio to sales falling from 9 percent in the first half of 1953 to 7½ percent in the first half of this year. The before-tax profits-sales ratio is currently at a low for the postwar period, but somewhat larger than the rate prevailing in 1929.

Because of the sizable cut in Federal taxes, stemming largely from the elimination of the excess profits tax, after-tax profits of manufacturers in the early part of 1954 were at an annual rate slightly higher than in the full year 1953. The volume of equity funds used in manufacturing was also higher in 1954 so that the rate of earnings to stockholders' equity was not much changed from a year ago.

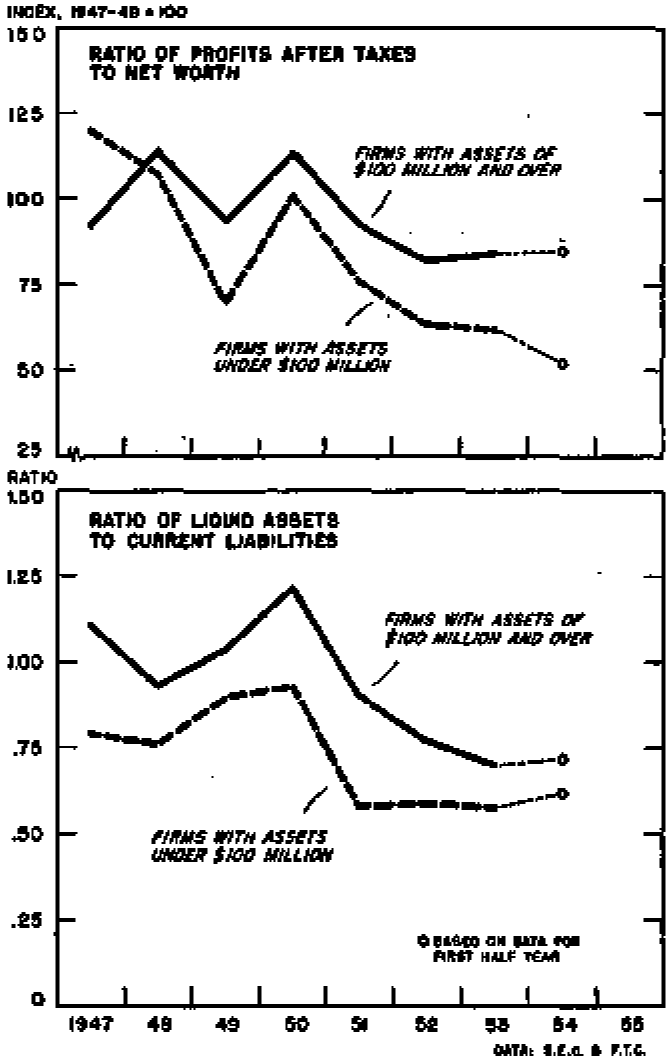
The use in this measure of book value net worth derived from asset totals which value fixed assets at historical costs, tends to overstate current profitability relative to that of more distant periods in the past because of the substantial increase in the general price level which has taken place and which is not fully reflected in the net worth. If profits after taxes are related, for example, to manufacturers' sales, the ratio, while up from 1953 to 1954, is below that of the late twenties (table 3). As is clear from a comparison of the second and third columns of this table the major factor in this lower relationship is the much higher relative level of taxes currently.

The fifth column of table 3 presents a summary view of trends in the capital structure of manufacturing concerns. The more permanent forms of invested capital include capital stock, surplus and undistributed profits together with long-term indebtedness. From the late twenties through 1945 there was a little net change in the composition of this invested capital. During the depression years, both debt and equity capital were reduced, the latter more sharply, while in the subsequent period, each type of capital expanded but debt did not keep pace with the rise in equities.

Since the end of the war, as pointed out above, long-term debt expansion has been more pronounced than the equity increase although this debt at present continues to occupy a lesser role in the capital structure of manufacturing than in industry generally.

Manufacturing Corporations

Profit Rates and Liquidity



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A measure of the debt burden on manufacturers is indicated by the final column of table 3. While interest payments by manufacturers rose steadily throughout the postwar period, practically all of the prewar debt outstanding has by now been retired or refunded into issues bearing the lower coupon rates which have prevailed for debt financing in recent decades. Thus, the effective interest rate being paid at the present time is substantially below that of earlier prosperous periods and this factor has in large degree offset the expansion in the volume of indebtedness. Moreover, the amount of funds available for payment of interest is currently far above that of earlier times, so that the relative share of these funds presently claimed by interest charges is low in historical perspective.

Financing costs down in 1954

The most recent period has seen a continuation of the relatively low cost of debt financing which has prevailed in the postwar period. At the same time there has been a striking improvement in terms of equity financing. As may be seen from the chart current earnings-price and dividend-price ratios for industrial concerns are at the low point for the postwar period. This reflects primarily the recent sharp advance of stock prices while after-tax earnings and dividends have improved slightly. It is clear from the chart that for most of the postwar period the terms of financing have strongly favored the issuance of debt rather than equity securities.

Differential industry experience

It is not possible at the present time to present detailed estimates of sources and uses of funds for manufacturing groups. However, some partial data covering principal items of capital programs and their financing help to shed light on major differences among manufacturing industries.

Table 4 indicates the amount of internal funds available by industry for the period 1946 through 1953, and the ratio of these funds to new investment in physical assets.

Table 4.—Relation of Internal Sources of Funds, New Investment in Physical Assets by Manufacturing Industry, 1946–53

	Internal funds		
	Billions of dollars	Ratio to plant and equipment outlays	Ratio to plant and equipment outlays and increase in value of inventories
All manufacturing corporations	**72.6**	**1.02**	**.73**
Food	6.7	1.07	.76
Textiles	4.9	1.17	.88
Paper	3.4	1.17	.97
Chemicals	7.2	.87	.71
Petroleum	10.0	.84	.68
Rubber	1.4	1.37	.91
Other nondurables	4.4	1.57	.84
Stone, clay, glass	2.4	1.10	.00
Basic and fabricated metals	12.5	1.05	.80
Machinery, excluding electrical	8.3	1.43	.78
Electrical machinery	3.2	1.24	.63
Transportation equipment	6.5	1.07	.63
Other durables	4.3	1.26	.70

Source: U. S. Department of Commerce, Office of Business Economics.

While the plant and equipment outlays of all but two groups—chemicals and petroleum—were covered by internal funds, practically all groups required additional financing to take care of fixed capital and inventory requirements combined, and for all manufacturing corporations, the gap amounted to about one-fourth. This gap was filled for the most part by increasing both long- and short-term debt.

The chemicals and petroleum groups were large postwar users of long-term debt, accounting for one-fourth of the total expansion in manufacturing. The petroleum industry normally makes rather heavy use of debt in long-term financing, but it may be noted its postwar debt increase was somewhat less than the prewar experience.

Industry profit ratios

Virtually all major manufacturing industries experienced declines in profit volume and profit-sales ratios from 1953 to 1954 on a before-tax basis. The sharpest reductions in before-tax profit-sales ratios in this period occurred in the textile and furniture groups. These latter industries together with lumber and apparel manufacturers are currently at or near the postwar lows in terms of profits before taxes.

Earnings after taxes in 1954 were well maintained for most of the major manufacturing groups, with the transportation equipment, food, and tobacco groups showing some improvement in profits between the second quarter of 1953 and the comparable period of 1954. The decline in after-tax profits was sharpest in the textile group, which in mid-1954 was experiencing its lowest return on capital of the postwar period. The apparel and furniture industries were likewise close to postwar lows in the second quarter of this year.

The recent profit experience of manufacturing and all corporations is placed in long-term perspective in table 5 which relates profits and taxes to total national income arising in these sectors of the economy.

Table 5.—Profits Share of Income Originating in Corporate Business, Selected Years, 1929–54

[Percent]

	Profits share	Profits before taxes	Taxes	Profits after taxes	Inventory valuation adjustment
All corporate business:					
1929	21.8	20.8	3.0	17.7	1.0
1940	20.9	21.4	6.7	14.7	−.6
1941	25.3	29.7	13.5	16.2	−4.4
1951	25.6	26.4	14.8	11.5	−.8
1952	23.5	22.9	12.7	10.2	.6
1953	22.1	22.7	12.5	10.2	−.6
1954 [1]	20.6	20.6	10.5	10.1	.0
Manufacturing corporate business:					
1929	25.7	24.2	3.1	21.1	1.5
1940	26.2	26.8	8.4	18.4	−.6
1941	30.7	35.7	17.3	18.4	−5.0
1951	29.3	30.1	17.5	12.6	−.8
1952	25.3	24.5	13.8	10.7	.8
1953	23.4	24.1	13.5	10.6	−.7
1954 [1]	22.4	22.4	11.1	11.3	.0

1. First half, seasonally adjusted, at annual rates.
Source: U. S. Department of Commerce, Office of Business Economics.

The relative volatility of profits before taxes as well as the cushioning effect of tax reductions in the 1953–54 period are readily apparent. While profits before taxes for all corporations are currently about as high a proportion of the total income flow from corporations as in 1929 and 1940, the share that manufacturers' profits is of total corporate income originating in manufacturing is down somewhat over these periods. On an after-tax basis the reductions from prewar in the income shares represented by profits are much more pronounced both in the manufacturing component and in the corporate sector as a whole.

Industrial liquidity

Virtually all manufacturing groups started their postwar capital expansions with an excess of liquid resources and the drawing down of these assets served temporarily as an im-

(Continued on page 23)